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ABSTRACT

The general information necessary for planning a high school program in agricultural educated is provided, based on the following briefly described occupational areas: agricultural production, agricultural supplied/services, agricultural mechanics, agricultural products (processing, inspection, and marketing), agricultural resources (conversation, utilization, and services), ornamental horticulture (production, processing, marketing, and services), forestry (production, processing, management, marketing, and services), and other agricultural occupations (to be selected as necessary for particular programs). Part of the document is laid out in work form. The planner can fill in the characteristics and needs of his own community and thus tailor his program to the local situation. (SA)

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A Guide for Planning

PROGRAMS IN AGRICULTURAL EDUCATION

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A Guide for Planning

PROGRAMS IN AGRICULTURAL EDUCATION

Developed by
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PUBLICATIONS RELATED TO PLANNING AGRICULTURAL EDUCATION PROGRAMS

1000 A Guide for Planning Programs in Agricultural Education

1001 A Guide for Planning Instruction in Agricultural Education

1002 A Guide for Planning Instruction for Adults in Agricultural Education

1003 A Guide for Teaching Basic Agriculture

1004 A Guide for Teaching Agricultural Production

1005 A Guide for Teaching Agricultural Supplies/Services

1006 A Guide for Teaching Agricultural Mechanics

1007 A Guide for Teaching Agricultural Products

1008 A Guide for Teaching Ornamental Horticulture

1009 A Guide for Teaching Agricultural Resources

1010 A Guide for Teaching Forestry

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Foreword

The passage of the Federal Vocational Education Act of 1963 and the 1968 Amendments to this Act gives a mandate to leaders in vocational and technical education to expand program objectives. This mandate falls heavily upon the local teachers of agriculture as they plan to make their instructional programs relevant. In contemporary approaches to planning agricultural education programs for local communities there is one need that transcends all other — that is a positive identification of appropriate instructional content for vocational and technical education in agribusiness and natural resources.

Planned agricultural education programs are a necessity in our total education system, being called upon to give the vocational and technical education training for approximately four out of every ten workers in the national labor force. With the passage of the 1963 Act the "door" was opened for shifting emphasis on instructional programs from specific job titles to job clusters. This concept is further emphasized in the 1968 Amendments. The job cluster approach is not new to program planning in agricultural education. Program planning based on utilization of community resources has been used through the years and has provided for flexibility in the preparation of individuals to enter and progress in a diversity of agricultural occupations.

This publication presents in one volume the teacher's summary of factual information about the resources of his school district. It is believed that this information, gathered from many sources, represents the most relevant basis for planning agricultural education programs to meet the needs of all the people of the community.

The ultimate value of this unit on curriculum development in agricultural education, in large part, will be determined by the success the teacher has in obtaining accurately the community information needed, and the teacher's commitment to action. Many teachers of vocational agriculture take pride in developing a 'tailor-made' instructional program for individual communities. The committee had this individuality of program planning in mind when they designed the format for summarizing the data collected. It is no coincidence that the format used clusters the information collected, and again clusters the occupational titles by areas of related subject matter. This was done in order to conform to a simplified coding and reporting system developed by the U. S. Office of Education.

It is not contemplated that the teacher will be able to assemble all of the community information needed before he begins to plan his instructional programs, but he can surely make a beginning by using the information that is most readily available. The United States Census of Agriculture has an abundance of county data that can be

useful in planning local agricultural education programs. This, together with systematic surveys, purposeful observation, chamber of commerce data, community development data, et cetera, will provide, in time, adequate community resource data for use in planning effective instructional programs in agriculture. Such data, if kept up-dated periodically, will provide the teacher with a sound basis for relevant agricultural education instructional programs for his school district.

Obed L. Snowden, Professor and Head
Agricultural Education Department
Mississippi State University

Acknowledgments

This publication brings together many years of planning and work in agricultural education. It is impossible to include the names of all persons who have contributed to its development. However, special appreciation is extended to the following persons:

Dr. O. L Snowden, Professor and Head, Department of Agricultural Education, Mississippi State University

Dr. James F. Shill, Associate Professor, Department of Agricultural Education, and Co-Director, Research Coordinating Unit, Mississippi State University

Appreciation is expressed to Mr. Tom E. Ellis, Supervisor of Agriculture, Vocational Education Division, State Department of Education, for his leadership in developing programs of agricultural education. Other supervisory personnel of the State Department of Education have also made valuable contributions. Their assistance is gratefully acknowledged.

The committee acknowledges the contributions that have been made to program planning by the "Teacher's Handbook for Vocational Agriculture." Considerable use was made of the Handbook in the preparation of this Guide.

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General Information for Planning a Program in Agricultural Education

Purpose

Programs in agricultural education should be planned on the basis of need. The purpose of this publication is to assist teachers in such planning by giving consideration to the agricultural activities and needs of the area in which a program is located. Educational and occupational activities should be provided which will develop the skills needed by persons who will be employed in agricultural occupations. Once employed, additional education is essential if adults are to keep abreast of changes in agricultural technology.

Terminology

Several terms which are used in this publication and their definitions are listed below:

Agriculture — All of the services and activities involved in producing plants and animals, and their products, and in getting them to the consumer. The term may also include the processes involved in maintaining the productivity of agricultural resources and the environment.

Agricultural Education — An organized instructional and experience program involving agricultural subjects. This includes the combination of the agricultural production and management operations and associated services; the manufacturing and distribution of agricultural equipment and supplies; the processing, storage, marketing and distribution of food, fiber and other agricultural commodities; the environmental protection and wise use of renewable natural resources including air, forest, water, soil, animal, marine, and plant life and recreational (aesthetic) resources. It also involves associated education and research in all the above areas. (May also be known as "vocational agriculture.")

Occupational experience program — Learning situations designed jointly by school representatives and employers to give students direct contact with, and/or experience in, the daily work of agricultural occupations. Students usually perform learner-level tasks in regular farm or nonfarm agricultural employment situations. This term includes supervised farming programs and other kinds of practical experience programs.

Agricultural occupation — An occupation involving knowledge and skills in agriculture.

Community — The area in which students live, usually the school district.

Persons Served by Agricultural Education

The groups of persons served by agricultural education include the following:

1. Secondary school youths, out-of-school youths, and adults who wish full-time vocational and technical training for entry into agriculture;

2. Employed youths and adults who need vocational and technical training in agriculture to upgrade their occupational performance;

3. Those youths and adults who cannot benefit from regular vocational and technical education programs in agriculture, but who can benefit from special programs designed to meet their needs.*

Purpose of Agricultural Education

The major purpose of the agricultural education program is to provide quality education as a part of the total program of public education in agriculture and renewable natural resources. Programs should be available for all persons in all geographical areas preparing for employment, those employed, and those continuing education for occupations requiring knowledges and skills in the broad field of agriculture.

Major Objectives of Agricultural Education

The major program objectives are as follows:

1. To develop agricultural competencies needed by individuals engaged in, or preparing to engage in, production agriculture.

2. To develop agricultural competencies needed by individuals engaged in, or preparing to engage in, agricultural occupations other than production agriculture.

3. To develop an understanding of and appreciation for career opportunities in agriculture and the preparation needed to enter and progress in agricultural occupations.

4. To develop the ability to secure satisfactory placement and to advance in an agricultural occupation through a program of continuing education.

***Objectives for Vocational and Technical Education in Agriculture** (Washington: U.S. Department of Health, Education, and Welfare, 1966), p. 4.

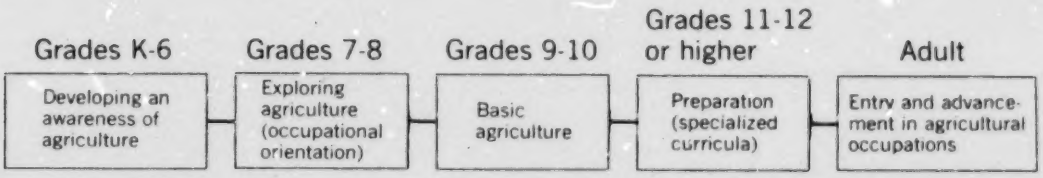
5. To develop those abilities in human relations which are essential in agriculture occupations.

6. To develop the abilities needed to exercise and follow effective leadership in fulfilling occupational, social, and civic responsibilities.*

Career Education in Agriculture

Instruction in agricultural and related subjects is not to be delayed until the high school level. Such instruction should begin much earlier and contribute to the career development of all persons. This means that a teacher of agriculture may frequently be called upon to assist other teachers in providing agricultural instruction.

The following diagram is used to explain career education in agriculture:



Instruction in Agricultural Education

Agriculture is comprised of the group of related courses or units of subject matter which are organized for carrying on learning experiences concerned with the preparation for or upgrading in occupations requiring knowledge and skills in agriculture subject. The functions of agricultural production, agricultural supplies, agricultural mechanization, agricultural products (processing), ornamental horticulture, forestry, agricultural resources, and the services related thereto, are emphasized in the instruction designed to provide opportunities for pupils to prepare for or improve their competencies in agricultural occupations.

Classification of Occupations

The occupational codes and code numbers for agriculture as used by the U. S. Office of Education are listed below:

01.01 **AGRICULTURAL PRODUCTION**

Subject matter and learning activities which are concerned with the principles and processes involved in the planning related to and the economic use of facilities, land, water, machinery, chemicals, finance, and labor in the production of plant and animal products. Activities include classroom instruction and laboratory experiences in and out of school, including farms, ranches, and other agriculturally related establishments.

***Ibid.** Pp. 4-5.

01.02 **AGRICULTURAL SUPPLIES/SERVICES**

Subject matter and learning experiences concerned with preparing students for occupations involved in providing consumable supplies used in the production phase of agriculture, including processing, marketing, consulting, and other services.

01.03 **AGRICULTURAL MECHANICS**

A combination of subject matter and activities designed to develop abilities necessary for assisting with and/or performing the common and important operations or processes concerned with the selection, operation, maintenance, and use of agricultural power, agricultural machinery and equipment, structures and utilities, soil and water management, and agricultural mechanics shop, including kindred sales and services.

01.04 **AGRICULTURAL PRODUCTS (PROCESSING, INSPECTION, AND MARKETING)**

A combination of subject matter and learning experiences designed to teach information processes, scientific principles, and management decisions concerned with agricultural competencies in the food and non-food technology occupations. The groups of food products include (1) meat, fish, poultry, and eggs; (2) dairy products; (3) fruits and vegetables; (4) cereal grains; and (5) other foods and beverages. The non-food products include cotton, tobacco, and wool. Instruction may be provided in any or all groups of these products.

01.05 **ORNAMENTAL HORTICULTURE (PRODUCTION, PROCESSING, MARKETING, AND SERVICES)**

Organized subject matter and practical experiences concerned with the culture of plants used principally for ornamental or esthetic purposes. Instruction emphasizes knowledge and understanding important to establishing, maintaining, and managing ornamental horticulture enterprises.

01.06 **AGRICULTURAL RESOURCES (CONSERVATION, UTILIZATION, AND SERVICES)**

A combination of subject matter and planned learning experiences concerned with the principles and processes involved in the conservation and/or improvement of natural resources such as air, forests, soil, water, fish, plants, and wildlife for economic and recreational purposes. Instruction also emphasizes such factors as the establishment, management, and operation of forest lands for recreational purposes.

01.07 **FORESTRY (PRODUCTION, PROCESSING, MANAGEMENT, MARKETING, AND SERVICES)**

A combination of subject matter and experiences concerned with the multiple use of forest lands and resources, including their management and protection.

01.99 **AGRICULTURE, OTHER**

Include here other organized subject matter and experiences emphasized in agriculture which are not listed or classifiable in one of the above categories. (Specify.)*

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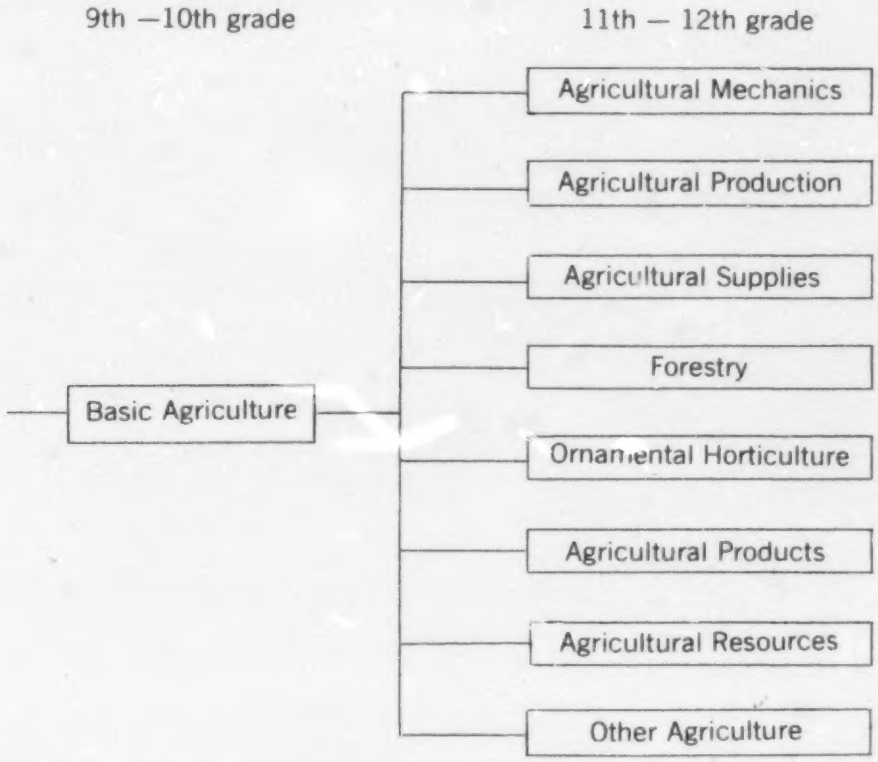
*__Vocational Education and Occupations__ (Washington: U. S. Office of Education, July 1969).

Organizing an Agricultural Education Program

It is essential that instruction in agriculture be articulated; that is, it should be interrelated and interdependent in order to prevent needless repetition and bring about coordination. The aim of articulation is to facilitate the continuous and efficient education of students from one grade or level to the next.

Instruction in agriculture may vary considerably from one school system or community to another. Generally, the instruction in the ninth and tenth grades is in the "basics" of agriculture. Instruction in the eleventh and twelfth grades tends to be more specialized. Post secondary agricultural instruction is even more specialized and is at the technical level. Instruction at all levels should be designed around the employability of the students. A program of agricultural education for in-school students may be designed as follows:



Many agricultural education programs also include instruction for adults. Such instruction should be designed to improve the occupational competencies as need in all areas of agriculture. Adult instruction should be articulated with the previous agricultural education of the enrollees.

Advisory Committee for Agricultural Education Program

List below members of the advisory committee for the local agricultural education program.

Name	Occupation	Address	Telephone Number

Basic Information for Planning
A Program in Agricultural Education

Overall Development of Community

Briefly describe the overall community in terms of development, occupational opportunities, and where people secure employment.

_____

_____

_____

_____

_____

_____

Agricultural Development of Community

01.01 Agricultural Production

1. Status of farming operations

Number of farms	_____
Land in farms	_____(acres)
Average size of farms	_____(acres)
Value of land and buildings per farm	_____(dollars)
Average value of products sold per farm	_____(dollars)
Number of full-time farmers	_____
Number of part-time farmers	_____
Total number of farm workers	_____

2. Production Enterprises in the Community

Enterprises	Number of Farms	Production (number of acres or head)
Beef Cattle	_____	_____
Dairy Cattle	_____	_____
Cotton	_____	_____
Soybeans	_____	_____
Poultry	_____	_____
Vegetables	_____	_____
Swine	_____	_____
Catfish	_____	_____
Other (Specify)		
_____	_____	_____
_____	_____	_____
_____	_____	_____

01.02 Agricultural Supplies/Services

Number of Businesses in Agricultural Supplies/Services _____

Kind of Business	Number of Businesses	Number of Workers	Estimated Number of Replacement Workers Needed Annually
Agricultural Chemicals	_____	_____	_____
Feeds	_____	_____	_____
Seeds	_____	_____	_____
Fertilizers	_____	_____	_____
Other (Specify)			
_____	_____	_____	_____
_____	_____	_____	_____

01.03 Agricultural Mechanics

Kind of Business	Number of Businesses	Number of Workers	Estimated Number of Replacement Workers Needed Annually
Agricultural Power and Machinery			
Agricultural Construction and Maintenance			
Soil Management			
Water Management			
Agricultural Electrification			
Other (Specify)			

01.04 Agricultural Products (Processing, Inspection and Marketing)

Kind of Business	Number of Businesses	Number of Workers	Estimated Number of Replacement Workers Needed Annually
Food Products			
Dairy Products			
Non-food Products			
Other (Specify)			

01.05 Ornamental Horticulture

Kind of Business	Number of Businesses	Number of Workers	Estimated Number of Replacement Workers Needed Annually
Arboriculture (Shrubbery)	_____	_____	_____
Floriculture (Flowers)	_____	_____	_____
Landscaping	_____	_____	_____
Nurseries	_____	_____	_____
Turf	_____	_____	_____
Other (Specify)			
_____	_____	_____	_____
_____	_____	_____	_____

01.06 Agricultural Resources (Conservation, Utilization, and Services)

Kind of Business	Number of Businesses	Number of Workers	Estimated Number of Replacement Workers Needed Annually
Soil	_____	_____	_____
Wildlife (game farms and hunting areas)	_____	_____	_____
Water	_____	_____	_____
Fish (Recreational)	_____	_____	_____
Other (Specify)			
_____	_____	_____	_____
_____	_____	_____	_____

01.07 Forestry

Kind of Business	Number of Businesses	Number of Workers	Estimated Number of Replacement Workers Needed Annually
Forest Production			
Forest Protection			
Logging			
Wood Utilization			
Other (Specify)			

01.99 Agriculture, Other — Specify

Kind of Business	Number of Businesses	Number of Workers	Estimated Number of Replacement Workers Needed Annually

Local Program Objectives

List below the overall long-range objectives of the local program in agricultural education. These should be based on an analysis of the local community and reflect the needs that exist for instruction in agriculture.